

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 1 052 588 A2

(12)

## EUROPEAN PATENT APPLICATION

(43) Date of publication:

15.11.2000 Bulletin 2000/46

(51) Int. Cl.<sup>7</sup>: G06F 19/00, A63F 13/12

(21) Application number: 00303903.9

(22) Date of filing: 09.05.2000

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 10.05.1999 KR 1665799

(71) Applicant: Battle Top Co., Ltd.

Kangnam-gu, Seoul (KR)

(72) Inventor: Lee, Kang Min

Kwanak-gu Seoul (KR)

(74) Representative:

Mouteney, Simon James

MARKS &amp; CLERK,

57-60 Lincoln's Inn Fields

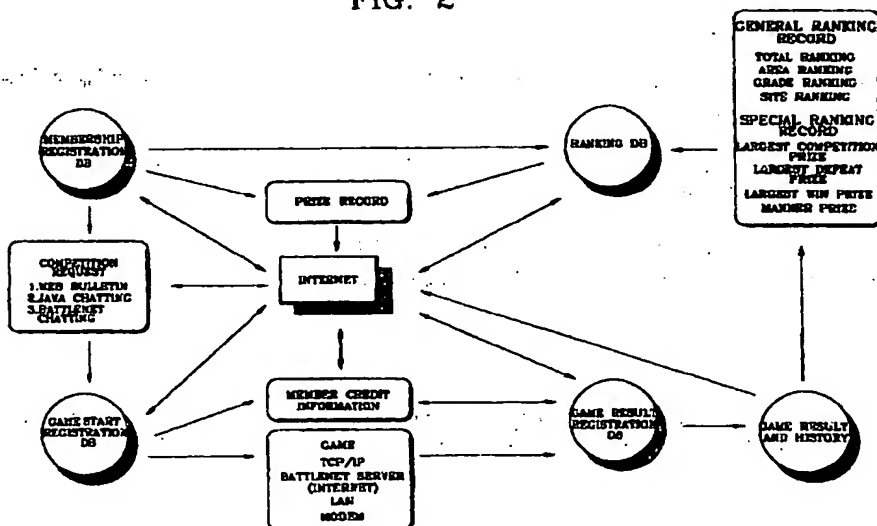
London WC2A 3LS (GB)

(54) Ranking service system for on-line games and a method therefor

(57) Disclosed is a ranking service system for on-line games and a method therefor for indicating records of gamers who enjoy on-line games. The ranking service system registers a user as a member based on a membership entry request from the user, registers competition start requests of plural users to user databases, respectively, based on user data inputted from registered users as members, registers users' competition results to the user databases, respectively, based on

competition result data from the plural users, and controls users' rankings based on the result. Accordingly, since a game opponent can be selected with reference to a competition state, a percentage of victories, ranking, and so on, a game can be carried out with his/her own level together with an enhanced interest and accomplishment with respect to the game.

FIG. 2



EP 1 052 588 A2

**Description****BACKGROUND OF THE INVENTION**

## 1. Field of the Invention

[0001] The present invention relates to a ranking service system for on-line games and a method therefor, and more particularly to a ranking service system for on-line games and a method therefor, capable of providing a ranking service for showing records of gamers who enjoy games on-line.

## 2. Description of the Prior Art

[0002] In recent years, on-line games, which are carried out between gamers through the internet, personal computer communications, or the like, are widely popularized.

[0003] Such on-line games can be carried out at home by gamers, but many gamers are recently enjoying on-line games in on-line game business places where personal computers accessible to the internet are provided and open to the public for a commercial purpose.

[0004] For example, the game called 'STARCRAFT', which is world-widely popularized, can be carried out by plural gamers through a connection to the so-called 'battlenet' server provided for STARCRAFT game services by using a communication device such as a modem.

[0005] Further, in case of games for which the battlenet is not supported, the games are generally carried out by using a communication network such as the internet.

[0006] However, in the games as stated above, gamers are simply satisfied with playing the games without objective ranking services providing an integrated evaluation for gamers' ranking.

[0007] Accordingly, gamers have difficulties in selecting a proper opponent to enjoy games suitable to a level of their own as well as have not so high a satisfaction in enjoying games.

**SUMMARY OF THE INVENTION**

[0008] In order to solve the above problems, it is an object of the present invention to provide a ranking service system for on-line games capable of providing a ranking service for showing records of gamers who enjoy games on-line.

[0009] It is another object of the present invention to provide a ranking service method for on-line games capable of providing a ranking service for showing records of gamers who enjoy games on-line.

[0010] In order to achieve the above objects, a ranking service system for on-line games comprises a database part for storing data of plural users and outputting a user data signal corresponding in response to a data readout signal from an external, a data input/output part for providing the data readout signal to the database part in response to the data readout control signal from the external, and for outputting the user data signal inputted from the database part in response to the data readout signal, a comparison part for inputting the user data signal from the data input/output part, inputting a data signal from the external, comparing the user data signal with the data signal in response to a data comparison control signal from the external, and for outputting a comparison signal, and a control part for outputting the data readout control signal and the data comparison control signal to the data input/output part and the comparison part, respectively, in response to the data signal inputted by an operation of the user, applying the data signal to the comparison part, and for outputting a result signal indicating a comparison result to the user in response to the comparison signal of the comparison part.

[0011] In order to achieve the above object, a ranking service method for on-line games according to the present invention comprises steps of: (i) registering a user as a member based on a membership entry request from the user; (ii) registering competition start requests of plural users to user databases, respectively, based on user data inputted from registered users as members; (iii) registering users' competition results to the user databases, respectively, based on competition result data from the plural users carried out through the step(ii); and (iv) controlling users' rankings based on a result of the step(iii).

[0012] With the above ranking service system for on-line games and a method therefor, a service such as a chatting room and the like can be provided for each game in finding out game levels, present ranking, the percentage of victories, and game states of gamers. Accordingly, since a competition opponent gamer suitable for a game can be easily selected with reference to his percentage of victories as well as ranking, a gamer can play a game suitable for his game level with enhanced interests and achievements in the game.

**BRIEF DESCRIPTION OF THE DRAWINGS.**

**[0013]** The above objects and other advantages of the present invention will become more apparent by describing in detail a preferred embodiment thereof with reference to the attached drawings, in which:

FIG. 1a and FIG. 1b are views for explaining concepts of a network structure of a ranking service system for on-line games according to an embodiment of the present invention;

FIG. 2 is a view for showing a database structure of a ranking service system for on-line games according to an embodiment of the present invention;

FIG. 3 is a block diagram for showing a structure of a ranking service system for on-line games according to an embodiment of the present invention;

FIG. 4 is a flow chart for explaining a ranking service method for on-line games according to an embodiment of the present invention;

FIG. 5a and FIG. 5b are flow charts for explaining a competition start registration steps of a ranking service method for on-line games according to an embodiment of the present invention;

FIG. 6a and FIG. 6b are flow charts for explaining a competition start registration steps of a ranking service method for on-line games according to an embodiment of the present invention;

FIG. 7 is a view for showing a menu display for a competition start registration by using a ranking service system for on-line games according to an embodiment of the present invention; and

FIG. 8 is a view for showing a menu display for a competition result registration by using a ranking service system for on-line games according to an embodiment of the present invention.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Hereinafter, a ranking service system for on-line games and a method therefor according to an embodiment of the present invention will be described in detail with reference to the accompanying drawings.

**[0015]** FIG. 1a and FIG. 1b are views for explaining concepts of a network structure of a ranking service system for on-line games according to an embodiment of the present invention. FIG. 1a is a view for showing a network structure which does not support a battlenet server, and FIG. 2 is a view for showing a network structure which supports the battlenet server.

In FIG. 1a, the first and second gamers 10 and 12 select a component gamer suitable for each other in a chatting room provided in a ranking server and carry out a competition start registration, to immediately enjoy a game by using the Internet.

In FIG. 1b, the first and second gamers 10 and 12 select a component gamer suitable for each other in the chatting room provided in the ranking server and carry out a competition start registration, connect the battlenet server to carry out a game, and register competition result information in the ranking server, to reflect the ranking.

Such selections of opponent gamers is generally performed through a web bulletin board of a web server, a chatting room of a chat server, a chatting room of the battlenet, or a chatting room of a ranking server, or opponent gamers can be found out by setting time at which a gamer wants to play a game through a bulletin board shown in Table 1 as below.

Table 1

ID	Level	Title	time	date	hit times
she	10	seeking a gamer	1:00 pm	02-05-99	14
sarumi	6	playing	3:30 am	02-05-99	3
fifabavo	10	starcraft	2:50 pm	02-05-99	10
dovesim	9	complete beginner	9:40 pm	01-05-99	18
GOSES	3	1:1 novice	10:40 am	02-05-99	21
europa	9	competition, contact me	8:30 am	03-05-99	7
kisses	3	a game with me	10:00pm	05-05-99	15
Mwvav	9	want a game	3:10 am	02-05-99	11

[0019] FIG. 2 is a view for showing a database structure of a ranking service system for on-line games according to an embodiment of the present invention.

[0020] As shown in FIG. 2, a database in the ranking service system for on-line games according to an embodiment of the present invention includes a membership database, a game start registration database, a game result registration database, a ranking database, and a game result history database.

[0021] At this time, the ranking database is composed of total ranking, area ranking, class ranking, site ranking, and so on. Further, games are carded out through the TCP/IP, the battlenet server, a local area network(LAN), a modem, or the like. Furthermore, as shown in Table 2 below, the ranking database supports gamer IDs, names, battle records, percentages of victories, credit standings, membership classifications, and the like.

Table 2

rank	ID	names	battle record	percentage of victories	credit standing (%)	belong to
107	Insia	Koindo	9 battles 5 wins 5 defeats 9/5/5	50	92	semi-member
115	MAGICI	songsar	4/4/0	100	80	dongam, magic plaza
120	lowgun	kimchig	13/5/8	38	85	semi-member
131	al3579	hongkil	1/0/1	0	100	dongam, magic plaza
134	vouiab	kimsera	4/1/3	25	74	semi-member
135	sbwkin	minari	9/8/1	88	100	kwacho, magic plaza
136	mbc724	yoosooh	9/1/8	11	93	kwacho, magic plaza

[0022] FIG. 3 is a block diagram for showing a structure of a ranking service system for on-line games according to an embodiment of the present invention.

[0023] As shown in FIG. 3, a ranking service system for on-line games stores plural gamer data, provides a data readout signal to a database part 104 for outputting a user data signal in response to the data readout signal and responding to a data readout control signal, a data input/output part 102 for outputting a gamer data signal inputted from the database part 104, a comparison part 106 for outputting a comparison signal by comparing a gamer data signal from the data input/output part 102 in response to a data comparison control signal from an external with a data signal from the external, and a control part 100 for outputting to the data input/output part 102 and the comparison part 106 the data readout control signal and the data comparison control signal in response to the data signal inputted by an operation of a gamer, providing the data signal to the comparison part 106, and for outputting to the gamer a result signal indicating the comparison result in response to the comparison signal from the comparison part 106.

[0024] Operations of the ranking service system as stated above will be described in detail with reference to FIG. 7 and FIG. 8.

[0025] FIG. 7 is a view for showing a menu display for a competition start registration by using a ranking service system for on-line games according to an embodiment of the present invention, and FIG. 8 is a view for showing a menu display for a competition result registration by using a ranking service system for on-line games according to an embodiment of the present invention. Here, a case of carrying out a competition start registration is illustrated for an example.

[0026] First of all, if a data signal such as an ID of his/her own, a password, an opponent ID, and the like which are membership information of his/her own as shown in FIG. 7 by operations of a computer system of a first gamer is inputted, the control part 100 provides the data signal from the first gamer to the comparison part 106, and then the data readout control signal and the data comparison control signal are outputted to the data input/output part 102 and the comparison part 106.

[0027] The data input/output part 102, in response to the data readout control signal from the control part 100, applies the data readout signal to the database part 104 in which plural gamer data are stored.

[0028] The database part 104 outputs a first gamer data signal corresponding to the data signal from the first gamer in response to the data readout signal, and the data input/output part 102 provides the first gamer data signal from the database part 104 to the comparison part 106.

[0029] The comparison part 106 compares the data signal from the first gamer with the first gamer data signal from

the database part 104 in response to the data comparison control signal and outputs to the control part 100 a comparison signal indicating whether or not the two data are the same.

[0030] The control part 100 outputs a result signal for showing a result to the first gamer in response to the comparison signal from the comparison part 106.

5 [0031] FIG. 4 is a flow chart for explaining a ranking service method for on-line games according to an embodiment of the present invention.

[0032] As shown in FIG. 4, a ranking server registers a gamer as a member based on a membership entry request from a gamer (Step S200).

[0033] Next, competition start requests from plural gamers are registered in databases corresponding to request 10 gamers, respectively, based on gamer data inputted from the gamers registered through the step S200 (S300).

[0034] Thereafter, a competition result of each of the gamers is registered in each gamer's database based on competition result data from plural gamers which are carried out through the step S300 (S400).

[0035] The ranking server controls a ranking of each gamer based on the result of the step S400 (S500).

[0036] From now on, the competition start registration step (S300) and the competition result registration 15 step (S400) will be described in detail with reference to FIG. 5 and FIG. 6.

[0037] FIG. 5a and FIG. 5b are flow charts for explaining a competition start registration steps of a ranking service method for on-line games according to an embodiment of the present invention.

[0038] Referring to FIG. 5a, the control part 100 inputs membership information from the first gamer (S301), and judges if the membership information from the first gamer exists in a database (S302).

20 [0039] If the membership information from the first gamer does not exist, the control part 100 returns to step S301, and, if the membership information from the first gamer exists, the control part 100 judges if the first gamer is a semi-member (S304).

[0040] If the first gamer is a semi-member, the control part 100 proceeds to the next step, and, if the first gamer is not a semi-member, the control part 100 judges if the first gamer is a regular member (S306).

25 [0041] If the first gamer is a regular member, the control part 100 proceeds to the next step, and, if the first gamer is not a regular member, the control part 100 judges that the first gamer is a member agency (S308).

[0042] Next, the control part 100 judges if competition start registration information is inputted from the first gamer as shown in FIG. 7 (S310), and, if the competition start registration information is not inputted, the control part 100 repeats the step S310.

30 [0043] If the competition start registration information is inputted, the control part 100 classifies the competition start registration information from the first gamer (S312), and judges if the competition start registration information from the first gamer is completed (S314).

[0044] If the competition start registration information from the first gamer is not completed, the control part 100 repeats the step S314.

35 [0045] If the competition start registration information from the first gamer is completed, the control part 100 receives membership information from a second gamer designated by the first gamer (S310).

[0046] Next, the control part 100 judges if the membership information from the second gamer exists in the database (S318).

40 [0047] If the membership information from the second gamer does not exist in the database, the control part 100 returns to the step S316.

[0048] If the membership information from the second gamer exists in the database, the control part 100 judges if the second gamer is a semi-member (S320).

[0049] If the second gamer is a semi-member, the control part 100 proceeds to the next step, and, if the second gamer is not a semi-member, the control part 100 judges if the second gamer is a regular member (S322).

45 [0050] If the second gamer is a regular member, the control part 100 proceeds to the next step, and, if the second gamer is not a regular member, the control part 100 judges that the second gamer is a member agency (S324).

[0051] Further, the control part 100 judges if competition start registration information from the second gamer is inputted (S326).

50 [0052] If the competition start registration information from the second gamer is not inputted, the control part 100 repeats the step S326.

[0053] If the competition start registration information from the second gamer is inputted, the control part 100 classifies the competition start registration information from the second gamer (S328), and judges if the competition start registration information of the second gamer is completed (S330).

55 [0054] If the competition start registration information of the second gamer is not completed, the control part 100 repeats the step S330, and, if the competition start registration information of the second gamer is completed, the control part 100 normally processes the competition start registration information of the first and second gamers to be stored in the database.

[0055] FIG. 6a and FIG. 6b are flow charts for explaining a competition start registration steps of a ranking service

method for on-line games according to an embodiment of the present invention:

**[0056]** Referring to FIG. 6a, the control part 100 inputs membership information from the first gamer(S40), and judges if the membership information from the first gamer exists in the database(S402).

**[0057]** If the membership information from the first gamer exists in the database, the control part 100 returns to the step S301, and, if the membership information from the first gamer exists in the database, the control part 100 judges if the first gamer is a semi-member(S404).

**[0058]** If the first gamer is a semi-member, the control part 100 proceeds to the next step, and, if the first gamer is not a semi-member, the control part 100 judges if the first gamer is a regular member(S406).

**[0059]** If the first gamer is a regular member, the control part 100 proceeds to the next step, and, if the first gamer is not a regular member, the control part 100 judges if the first gamer is a member agency(S408).

**[0060]** Next, the control part 100 judges if the competition result registration information is inputted from the first gamer as shown in FIG. 8(S410), and, if the competition result registration information is not inputted, the control part 100 repeats the step S410.

**[0061]** If the competition result registration information is inputted, the control part 100 classifies the competition result registration information from the first gamer(S412), and judges if the competition result registration information of the first gamer is completed(S414).

**[0062]** If the competition result registration information of the first gamer is not completed, the control part 100 repeats the step S414.

**[0063]** If the competition result registration information of the first gamer is completed, the control part 100 inputs membership information from the second gamer designated by the first gamer(S416).

**[0064]** Next, the control part 100 judges if the membership information of the second gamer exists in the database(S418).

**[0065]** If the membership information of the second gamer does not exist in the database, the control part 100 returns to the step S416.

**[0066]** If the membership information from the second gamer exists in the database, the control part 100 judges if the second gamer is a semi-member(S420).

**[0067]** If the second gamer is a semi-member, the control part 100 proceeds to the next step, and, if the second gamer is not a semi-member, the control part 100 judges if the second gamer is a regular member(S422).

**[0068]** If the second gamer is a regular member, the control part 100 proceeds to the next step, and, if the second gamer is not a regular member, the control part 100 judges that the second gamer is a member agency(S424).

**[0069]** Further, the control part 100 judges if the competition result registration information is inputted from the second gamer(S426).

**[0070]** If the competition result registration information is not inputted from the second gamer, the control part 100 repeats the step S426.

**[0071]** If the competition result registration information from the second gamer is inputted, the control part 100 judges if the competition result registration information from the second gamer is the same as the competition result registration information of the first gamer(S428).

**[0072]** If the competition result registration information of the first gamer is not the same as the competition result registration information of the second gamer, the control part 100 controls the ranking of the first and second gamers based on the competition result registration information from the first and second gamers(S430).

**[0073]** Next, the control part 100 records the controlled ranking and the competition result registration information of the first and second gamers and processes the competition result registration information(S432).

**[0074]** If the competition result registration information of the first gamer is not the same as the one of the second gamer, the control part 100 separately manages the competition result registration information of the first and second gamers(S434).

**[0075]** In the above, the competition result registration information of the first and second gamers is directly confirmed by an administrator of the ranking server and reflected on the ranking of the first and second gamers.

**[0076]** In the meantime, a ranking service system for on-line games according to another embodiment of the present invention will be described with reference to FIG. 9.

**[0077]** The ranking service system according to another embodiment emphasizes that an on-line game is carried out at a place designated by a user who is appointed at the battlenet server for a more precise ranking service to be performed to the user and ranking information occurring as a result is provided to the user.

**[0078]** That is, ranking data which is stored in a ranking database according to operations of a server administrator(not shown) is classified into predetermined grades(S100).

**[0079]** The ranking service system reads from a membership registration database membership information belonging to the classified grades and detects electronic email addresses of members(S110), the ranking service system uses a user computer to transmit to the user computer a message for a schedule and a user authentication information input request for progressing on-line games through the detected electronic email addresses(S120).

[0080] The user who received the message undergoes procedures for identifying her/himself in an off-line state to enter a certain place where on-line game system is prepared, the user who underwent an identification procedure in the off-line state enjoys on-line games in a new space, and the battlenet server can decide exact ranking:

[0081] Further, the ranking service system does not carry out, in the off-line state as stated above, an authentication procedure of the user who can enjoy the on-line games at the certain place, but can perform it by using a computer system.

[0082] That is, an authentication system, for example, a fingerprint recognition system, an eye iris recognition system, and the like, interfaced with the battlenet server is separately prepared; a user inputs a fingerprint of his/her own through the authentication system, and the fingerprint information is transmitted to the battlenet server as user information(S130).

[0083] That is, an administrator of the battlenet server requires a user to scan his/her fingerprint, transform the scanned fingerprint in a predetermined file format, and then transmit the file to the battlenet server. If the user scans his/her own fingerprint to be transmitted to the battlenet server according to the request of the battlenet server, the battlenet server builds another database by matching the transmitted scanned fingerprint with user's login information read from the membership registration database(S140).

[0084] The battlenet server receives fingerprint information which is user information transmitted from the authentication system, compares the received fingerprint information with the fingerprint information registered in the database(S150), and judges if there exists the same fingerprint information as a comparison result(S160).

[0085] As the judgement result in the step S160, if there exists the same fingerprint information of the user fingerprint information inputted by a user and information registered in the database, a registration of the user is identified, and then the user, actually a gamer, who uses computers installed at a certain place is allowed to carry out a communication connection to the battlenet server(S170).

[0086] The gamers who carry out communication connections to the battlenet server enjoys on-line games provided from the battlenet server, and the battlenet server can obtain ranking information achieved by the gamers of which authentications are confirmed in the battlenet server.

[0087] As the judgement result of the step S160, if there does not exist the same fingerprint information, an error message is outputted to be noticed by a game administrator(S180).

[0088] As stated above, according to a ranking service system for on-line games and a method therefor, services such as a chatting room for finding out game levels, present ranking, percentages of victories, and game states of plural gamers, and so on, can be supported game by game, and so on.

[0089] Accordingly, a competition opponent for a game which a gamer wishes to enjoy can be easily selected. Further, since a game opponent can be selected with reference to a competition state, a percentage of victories, ranking, and so on, a game can be carried out with his/her own level together with an enhanced interest and accomplishment with respect to the game.

[0090] Although the preferred embodiment of the present invention has been described, it will be understood by those skilled in the art that the present invention should not be limited to the described preferred embodiment, but various changes and modifications can be made within the spirit and scope of the present invention as defined by the appended claims.

## Claims

### 1. A ranking service system for on-line games, comprising:

a database part for storing data of plural users and outputting a user data signal corresponding in response to a data readout signal from an external;

a data input/output part for providing the data readout signal to the database part in response to the data readout control signal from the external, and for outputting the user data signal inputted from the database part in response to the data readout signal;

a comparison part for inputting the user data signal from the data input/output part, inputting a data signal from the external, comparing the user data signal with the data signal in response to a data comparison control signal from the external, and for outputting a comparison signal; and

a control part for outputting the data readout control signal and the data comparison control signal to the data input/output part and the comparison part, respectively, in response to the data signal inputted by an operation of the user, applying the data signal to the comparison part; and for outputting a result signal indicating a comparison result to the user in response to the comparison signal of the comparison part.

### 2. A ranking service method for on-line games, comprising steps of:

- (i) registering a user as a member based on a membership entry request from the user;
- (ii) registering competition start requests of plural users to user databases, respectively, based on user data inputted from registered users as members;
- (iii) registering users' competition results to the user databases, respectively, based on competition result data from the plural users carried out through the step(ii); and
- (iv) controlling users' s rankings based on a result of the step(iii).

3. The ranking service method as claimed in claim 2, wherein the step(ii) includes substeps of:

- (ii-1) classifying a member grade based on membership information inputted from a first user;
- (ii-2) completing the competition start registration of the first user based on whether or not competition start registration information of the first user is inputted;
- (ii-3) classifying a member grade based on member information inputted from a second user designated by the competition start registration information inputted by the first user to play a game with the first user; and
- (ii-4) judging if a competition start registration of the second user is completed based on whether or not competition start registration information of the second user is inputted and for processing the competition start registration.

4. The ranking service method as claimed in claim 3, wherein the substep(ii-1) includes substeps of:

- (a) judging if the membership information inputted from the first user exists in the database;
- (b) judging if the first user is a semi-member in case that the membership information exists in the database;
- (c) proceeding to the substep(ii-2) if the first user is the semi-member;
- (d) judging if the first user is a regular member in case that the first user is not the semi-member;
- (e) proceeding to the substep(ii-2) if the first user is the regular member; and
- (f) judging that the first user is a member agency in case that the first user is not the regular member.

5. The ranking service method as claimed in claim 3, wherein the substep(ii-2) includes substeps of:

- (g) judging if the competition start registration information from the first user is inputted;
- (h) repeating the substep(g) if not inputted;
- (i) classifying the competition start registration information from the first user if inputted;
- (j) judging if the competition start registration of the first user is completed;
- (k) repeating the substep(j) if not completed; and
- (l) proceeding to the substep(ii-3) if completed.

6. The ranking service method as claimed in claim 3, wherein the substep(ii-3) includes substeps of:

- (m) judging if the membership information inputted from the second user exists in the database;
- (n) judging if the second user is a semi-member in case that the membership information exists in the database;
- (o) proceeding to the substep(ii-4) if the second user is the semi-member;
- (p) judging if the second user is a regular member in case that the second user is not the semi-member;
- (q) proceeding to the substep(ii-4) if the second user is the regular member; and
- (r) judging that the second user is a member agency in case that the second user is not the regular member.

7. The ranking service method as claimed in claim 3, wherein the substep(ii-4) includes substeps of:

- (s) judging if the competition start registration information from the second user is inputted;
- (t) repeating the substep(s) if not inputted;
- (u) classifying the competition start registration information from the second user if inputted;
- (v) judging if the competition start registration of the second user is completed;
- (w) repeating the substep(v) if not completed; and
- (x) proceeding to the substep(iii) if completed.

8. The ranking service method as claimed in claim 2, wherein the step(iii) includes substeps of:

- (iii-1) classifying a member grade based on membership information inputted from a first user;



(iii-2) completing a competition result registration of the first user based on whether or not competition result registration information of the first user;

(iii-3) classifying a member grade based on membership information inputted from a second user designated by the competition result registration information inputted by the first user;

(iii-4) judging if the competition result registration information of the first and second users is the same based on whether or not competition result registration information of the second user is inputted;

(iii-5) controlling rankings of the first and second users based on the competition result registration information to be recorded in a database if the competition result registration information inputted from each of the first and second users is the same; and

(iii-6) suspending the record of the competition result registration information of the first and second users into the database, directly confirming and processing the competition result registration information by an administrator, if the competition result registration information inputted from each of the first and second users is not the same.

9. The ranking service method as claimed in claim 8, wherein the substep(iii-1) includes substeps of:

(A) judging if the membership information inputted from the first user exists in the database;

(B) judging if the first user is a semi-member in case that the membership information exists in the database;

(C) proceeding to the substep(iii-2) if the first user is the semi-member;

(D) judging if the first user is a regular member in case that the first user is not the semi-member;

(E) proceeding to the substep(iii-2) if the first user is the regular member; and

(F) judging that the first user is a member agency in case that the first user is not the regular member.

10. The ranking service method as claimed in claim 8, wherein the substep(iii-2) includes substeps of:

(G) judging if the competition start registration information from the first user is inputted;

(H) repeating the substep(G) if not inputted;

(I) classifying the competition start registration information from the first user if inputted;

(J) judging if the competition start registration of the first user is completed;

(K) repeating the substep(J) if not completed; and

(L) proceeding to the substep(iii-3) if completed.

11. The ranking service method as claimed in claim 8, wherein the substep(iii-3) includes substeps of:

(M) judging if the membership information inputted from the second user exists in the database;

(N) judging if the second user is a semi-member in case that the membership information exists in the database;

(O) proceeding to the substep(iii-4) if the second user is the semi-member;

(P) judging if the second user is a regular member in case that the second user is not the semi-member;

(Q) proceeding to the substep(iii-4) if the second user is the regular member; and

(R) judging that the second user is a member agency in case that the second user is not the regular member.

12. The ranking service method as claimed in claim 8, wherein the substep(iii-4) includes substeps of:

(S) judging if the competition result registration information from the second user is inputted;

(T) repeating the substep(S) if not inputted;

(U) judging if the competition result registration information from each of the first and second users is the same, if inputted;

(V) proceeding to the substep(iii-5) if the competition result registration information from the first and second users is the same; and

(W) proceeding to the substep(iii-6) if the competition result registration information from the first and second users is not the same.

13. A ranking service method for on-line games, comprising steps of:

(1) classifying into predetermined grades plural users registered in a ranking database;

(2) detecting from a member registration database electronic mail addresses of the users classified into the predetermined grades;

(3) transmitting a game schedule and user authentication information input request message by using the detected electronic mail addresses;

(4) transmitting to the battlenet server the user authentication information inputted by the users according to the user authentication information input request message;

(5) building a database by using the user authentication information inputted from the users;

(6) comparing the user authentication information inputted by the users with the user authentication information registered in the database; and

(7) allowing the users to carry out on-line games if there exists registered authentication information as the comparison result.

14. The ranking service method as claimed in claim 13, wherein the user authentication information is at least one of user fingerprint intonation and user eye iris information.

FIG. 1A

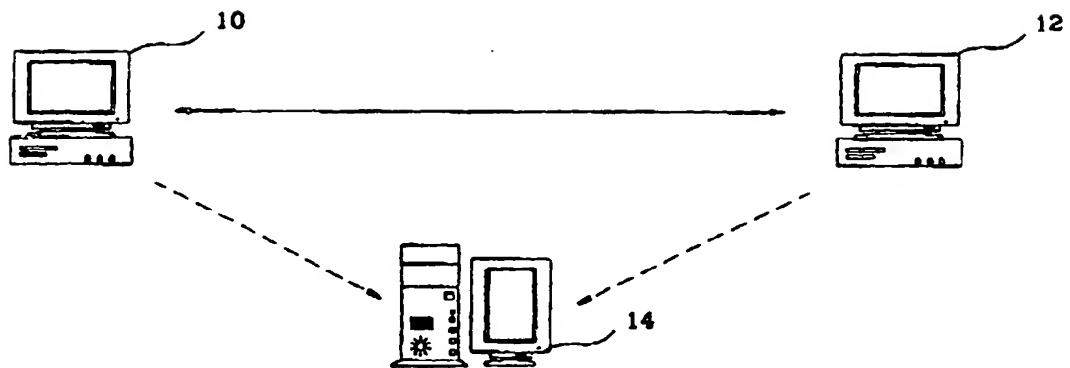
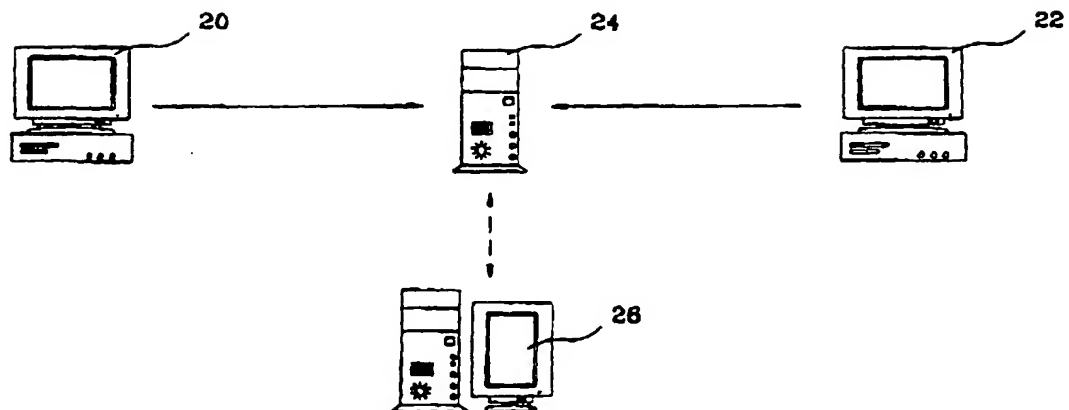


FIG. 1B



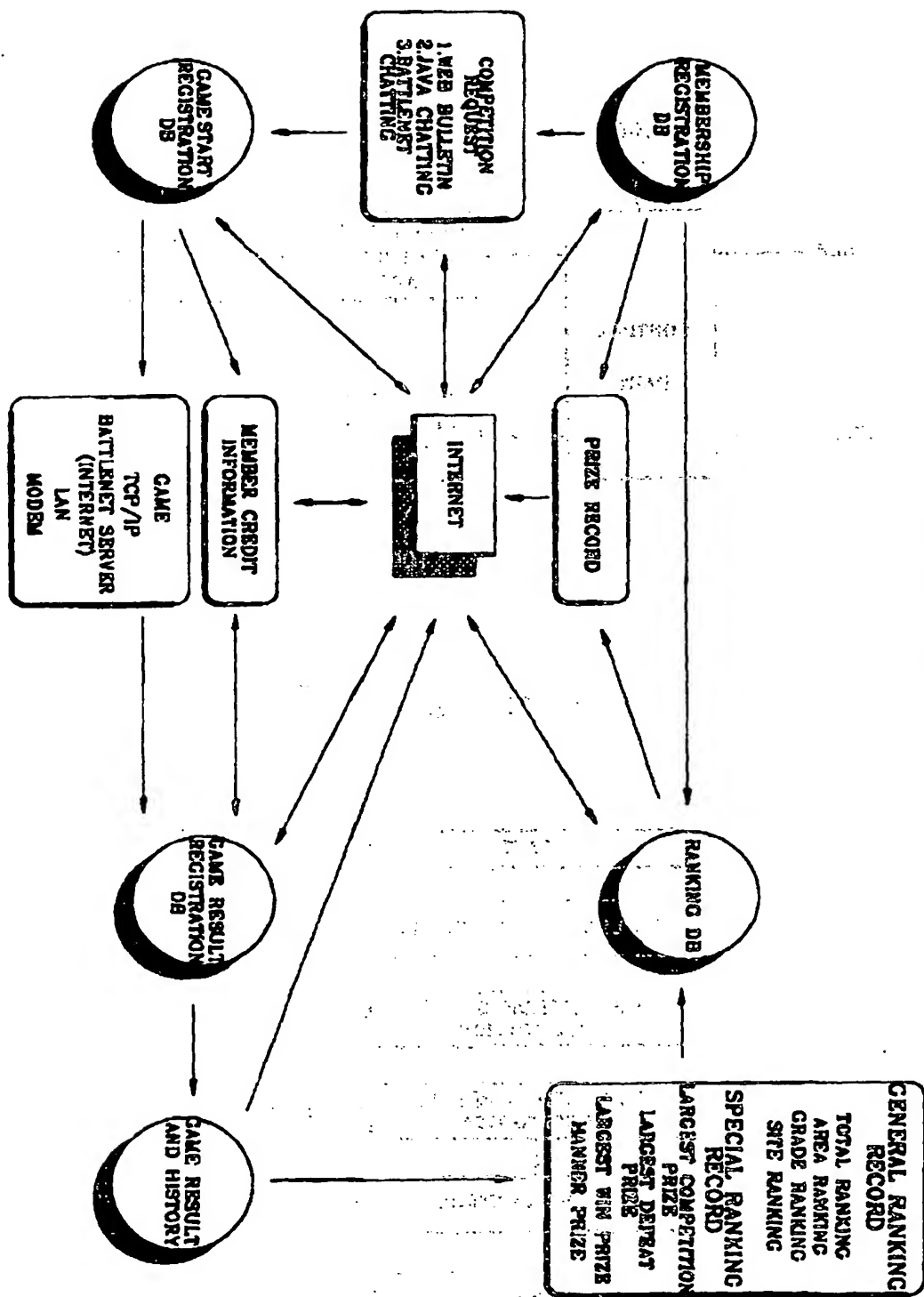


FIG. 2

FIG. 3

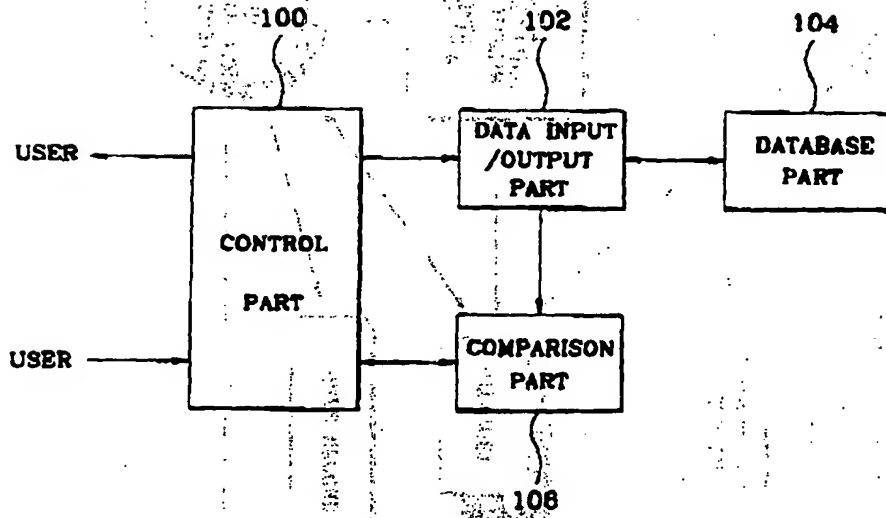


FIG. 4

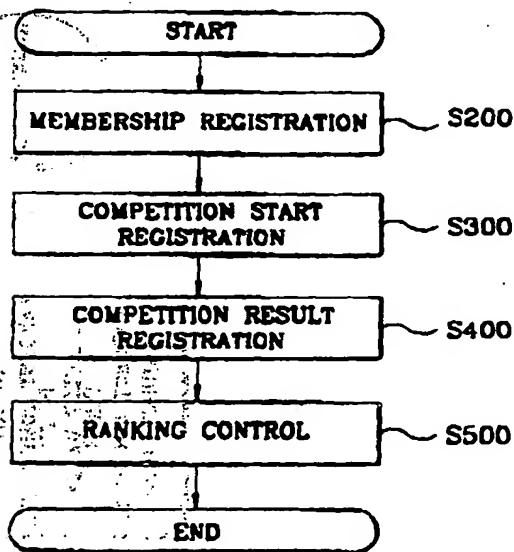


FIG. 5A

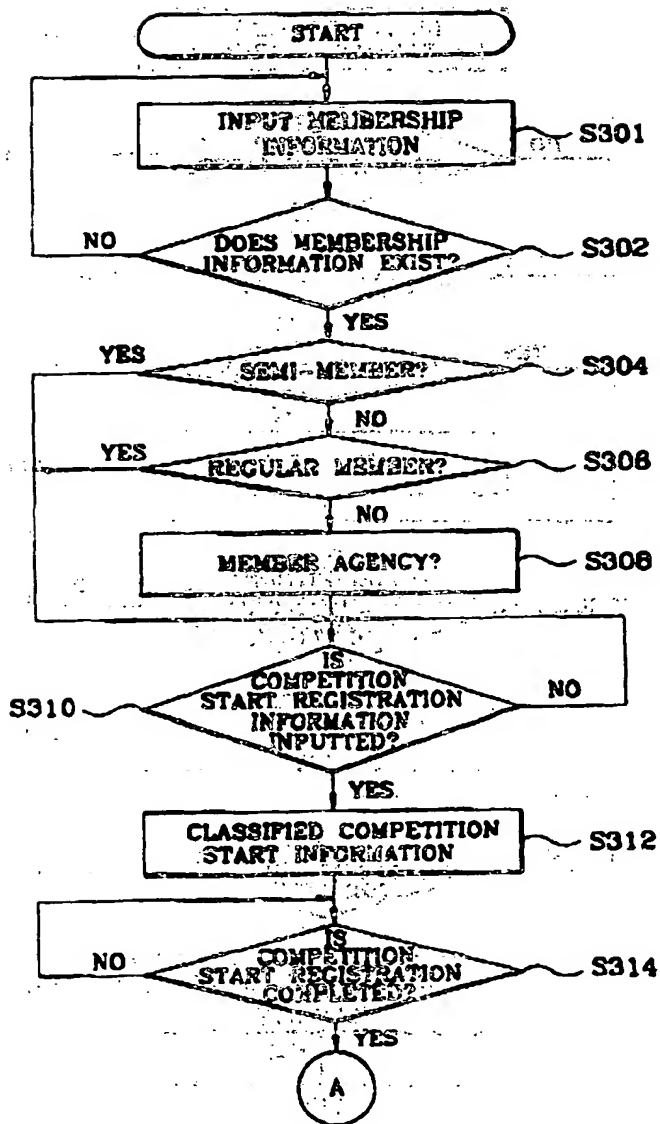


FIG. 5B

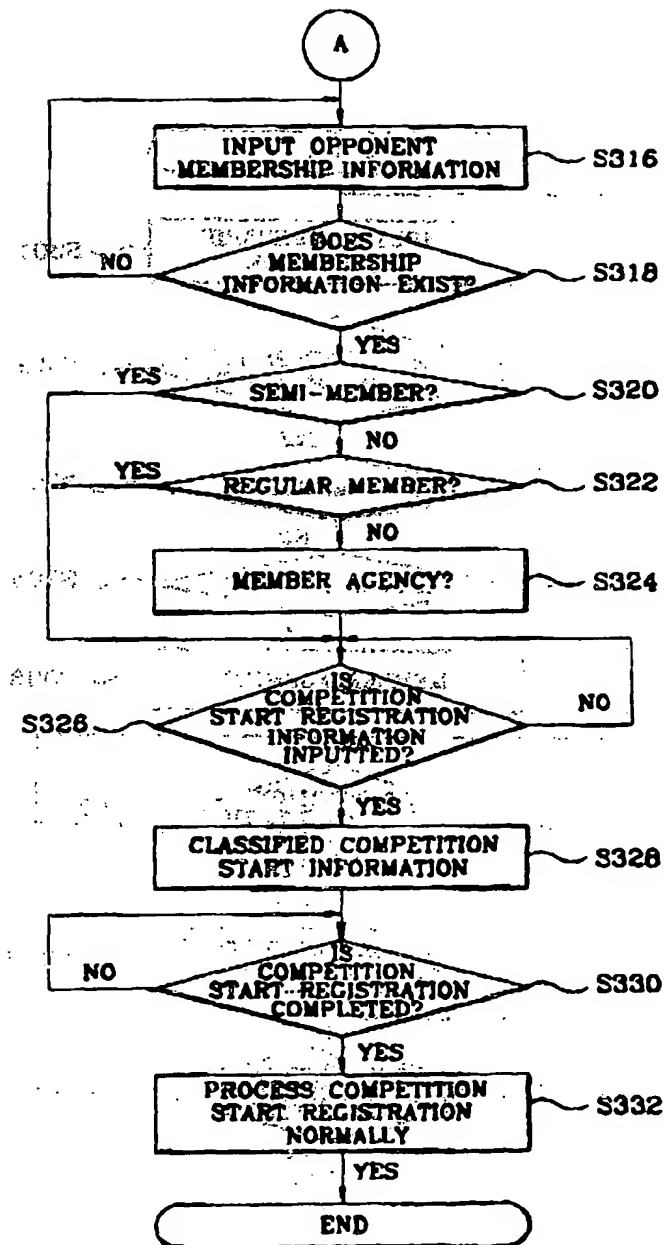


FIG. 6A

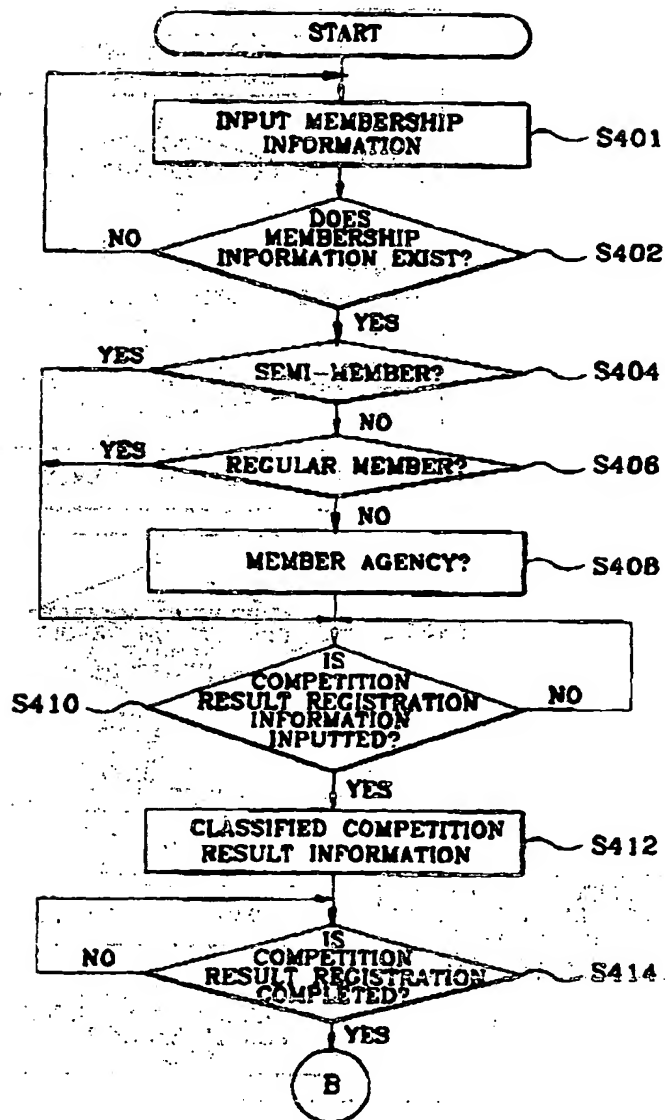




FIG. 6B

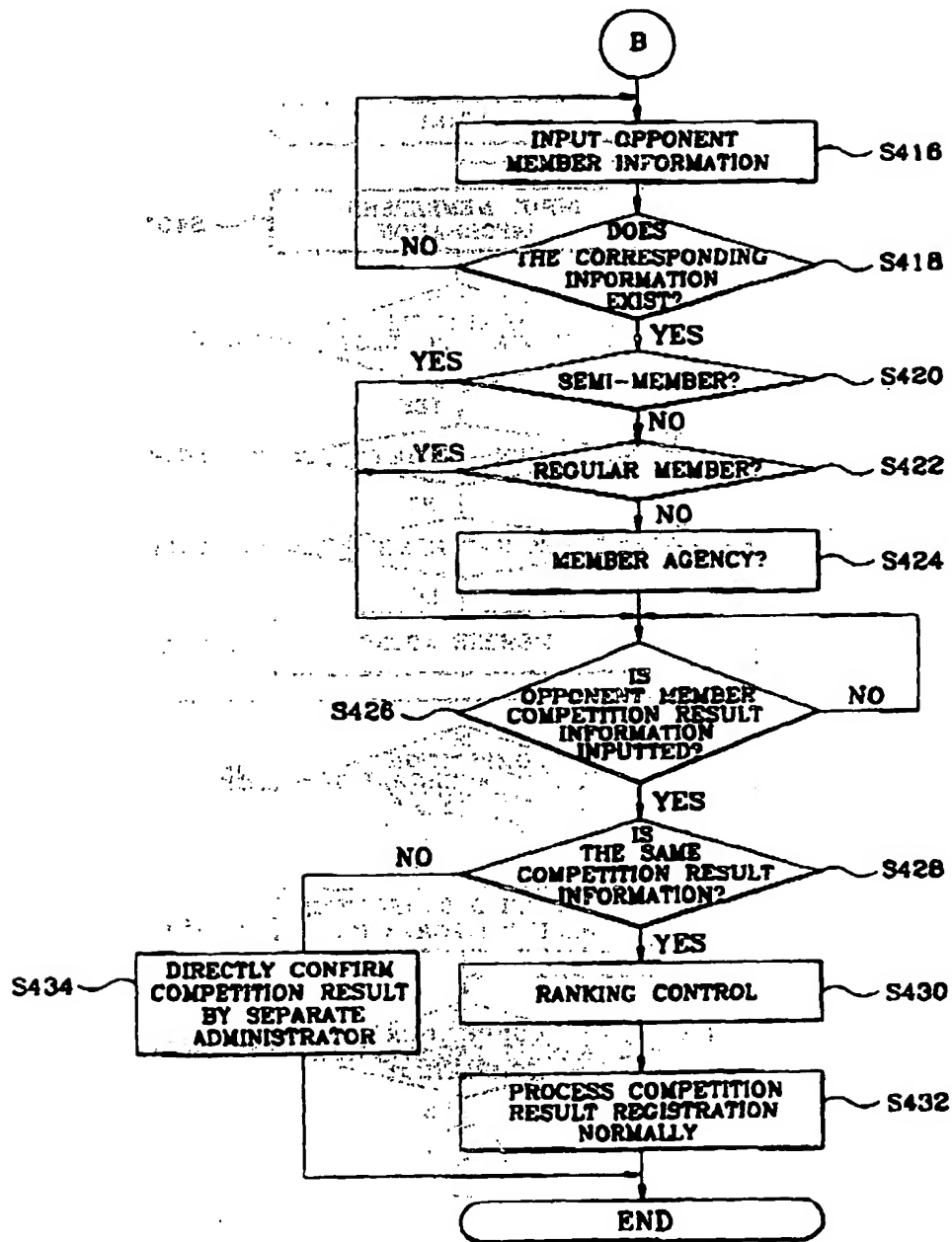


FIG. 7

**COMPETITION START  
REGISTRATION**

YOUR ID

PASSWORD

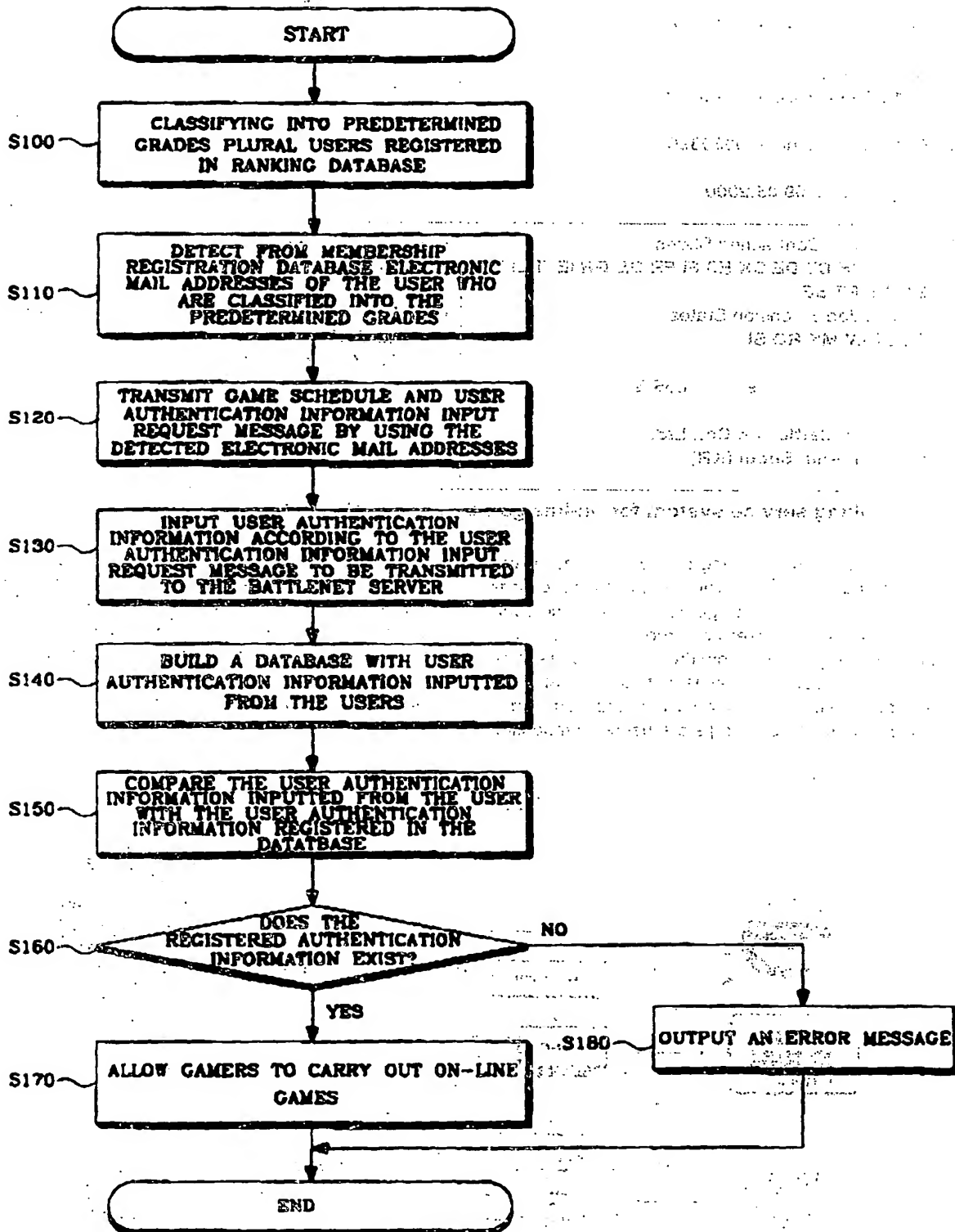
OPPONENT ID

**SUBMIT** **CANCEL**

FIG. 8

COMPETITION RESULT REGISTRATION	
YOUR ID	<input type="text"/>
PASSWORD	<input type="text"/>
OPPONENT ID	<input type="text"/>
COMPETITION RESULT(YOURS)	WIN O DEFFAT ©
OPPONENT MANNER	<input type="text" value="AVERAGE"/>
OPPONENT TECHNIQUE	<input type="text" value="AVERAGE"/>
USE RACE AND MAP	<input type="text" value="HUNTER MAP"/>
	<input type="button" value="SUBMIT"/> <input type="button" value="CANCEL"/>

FIG. 9





(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**02.05.2002 Bulletin 2002/18**

(51) Int Cl.7: **G06F 19/00, A63F 13/12**

(43) Date of publication A2:  
**15.11.2000 Bulletin 2000/46**

(21) Application number: **00303903.9**

(22) Date of filing: **09.05.2000**

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU**  
**MC NL PT SE**  
 Designated Extension States:  
**AL LT LV MK RO SI**

(72) Inventor: **Lee, Kang Min**  
**Kwanak-gu, Seoul (KR)**

(74) Representative: **Mounteney, Simon James**  
**MARKS & CLERK,**  
**57-60 Lincoln's Inn Fields**  
**London WC2A 3LS (GB)**

(30) Priority: **10.05.1999 KR 1665799**

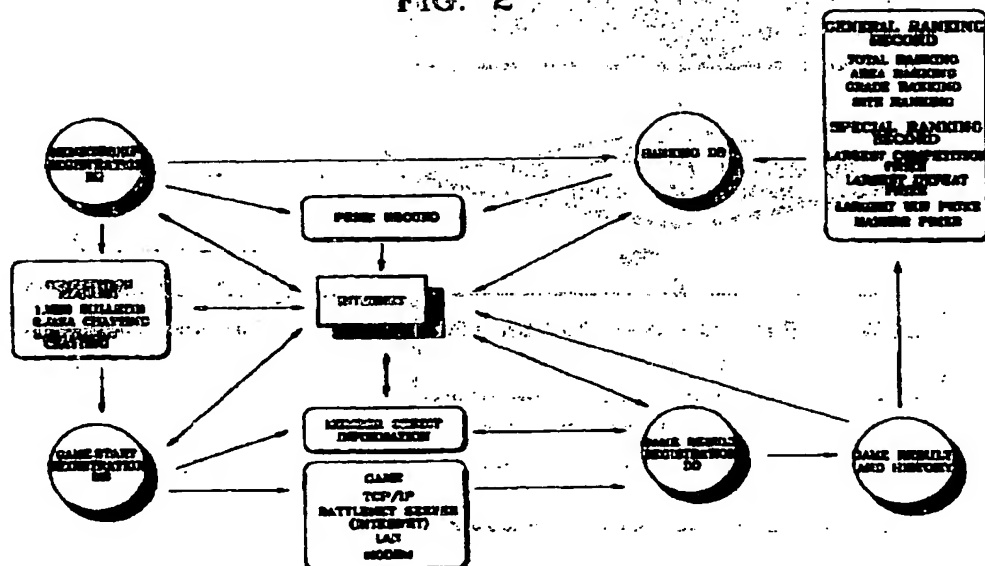
(71) Applicant: **Battle Top Co., Ltd.**  
**Kangnam-gu, Seoul (KR)**

(54) **Ranking service system for on-line games and a method therefor**

(57) Disclosed is a ranking service system for on-line games and a method therefor for indicating records of gamers who enjoy on-line games. The ranking service system registers a user as a member based on a membership entry request from the user, registers competition start requests of plural users to user databases, respectively, based on user data inputted from registered users as members, registers users' competition

results to the user databases, respectively, based on competition result data from the plural users, and controls users' rankings based on the result. Accordingly, since a game opponent can be selected with reference to a competition state, a percentage of victories, ranking, and so on, a game can be carried out with his/her own level together with an enhanced interest and accomplishment with respect to the game.

**FIG. 2**





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number

EP 00 30 3903

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 823 879 A (GOLDBERG ET AL) 20 October 1998 (1998-10-20)	1,2,13	G06F19/00 A63F13/12
A	* column 3, line 55 - column 6, line 36 * * column 7, line 36 - column 10, line 10 * * column 18, line 22 - line 54 * * column 27, line 41 - line 46 *	3-12	
X	EP 0 843 272 A (LVOV DENIS ERNESTOVICH) 20 May 1998 (1998-05-20) * abstract * * page 4, line 20 - page 5, line 18 *	1,2,13	
X	WO 97 19537 A (WALKER ASSET MANAGEMENT L P) 29 May 1997 (1997-05-29)	1,2	
A	* page 4, line 11 - line 24 * * page 58, line 4 - page 63, line 28; figure 10 *	3-13	
A	EP 0 745 412 A (TWO WAY TV LTD) 4 December 1996 (1996-12-04) * column 1, line 44 - column 2, line 35 * * column 3, line 45 - column 9, line 28 *	1-13	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	WO 95 31061 A (CATAPULT ENTERTAINMENT INC) 16 November 1995 (1995-11-16) * page 4, line 3 - page 8, line 30 *	1-13	G06F A63F
The present search report has been drawn up for all claims			
Place of search: <b>THE HAGUE</b>		Date of completion of the search <b>12 March 2002</b>	Examiner <b>Schenkels, P</b>
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03/82 (P4/C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 30 3903

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

12-03-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5823879	A	20-10-1998	AU 1833097 A	11-08-1997
			CA 2243582 A1	24-07-1997
			CN 1212634 A	31-03-1999
			EP 0956119 A1	17-11-1999
			JP 2000510352 T	15-08-2000
			WO 9726061 A1	24-07-1997
			US 6183366 B1	06-02-2001
			US 6264560 B1	24-07-2001
EP 0843272	A	20-05-1998	RU 2095112 C1	10-11-1997
			RU 2102790 C1	20-01-1998
			EP 0843272 A1	20-05-1998
			WO 9705557 A1	13-02-1997
			US 6117011 A	12-09-2000
WO 9719537	A	29-05-1997	US 5768382 A	16-06-1998
			US 5970143 A	19-10-1999
			AU 1081997 A	11-06-1997
			EP 0862824 A1	09-09-1998
			JP 2001526550 T	18-12-2001
			WO 9719537 A1	29-05-1997
			US 2002010013 A1	24-01-2002
EP 0745412	A	04-12-1996	US 5813913 A	29-09-1998
			AT 190516 T	15-04-2000
			DE 69607059 D1	20-04-2000
			DE 69607059 T2	14-12-2000
			DK 745412 T3	31-07-2000
			EP 0745412 A1	04-12-1996
			ES 2145383 T3	01-07-2000
			GR 3033522 T3	29-09-2000
			PT 745412 T	29-09-2000
WO 9531061	A	16-11-1995	AU 2471995 A	29-11-1995
			EP 0774186 A1	21-05-1997
			WO 9531061 A1	16-11-1995
			US 5956485 A	21-09-1999

EPO FORM P1459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**THIS PAGE BLANK (USPTO)**